

CLAIMS

WHAT IS CLAIMED IS:

1. A test strip for determining the concentration of at least one analyte in a physiological sample, said test strip comprising:
 - (a) a plurality of reaction zones, wherein each of said reaction zones is defined by a hydrophobic barrier; and
 - (b) a reagent composition present in each of said reaction zones.
2. The test strip according to claim 1, wherein said hydrophobic barrier comprises hydrophobic ink.
3. The test strip according to claim 1, wherein each of said reaction zones comprise the same reagent composition.
4. The test strip according to claim 1, wherein at least two of said reaction zones comprise different reagent compositions.
5. The test strip according to claim 1, wherein at least two of said reaction zones are capable of assaying for the same analyte, wherein said at least two of said reaction zones comprise different concentrations of at least one component of a testing reagent composition.
6. The test strip according to claim 1, wherein at least one of said reagent compositions comprises at least one member of an analyte oxidation based signal producing system.
7. The test strip according to claim 1, wherein said signal producing system further comprises an enzyme that converts at least one substrate into a chromogenic product in the presence of hydrogen peroxide.
8. The test strip according to claim 7, wherein said at least one substrate comprises a dye couple.
9. The test strip according to claim 7, wherein said enzyme is an oxidizing enzyme.

10. The test strip according to claim 9, wherein said oxidizing enzyme is a glucose oxidizing enzyme.

11. The test strip according to claim 1, wherein said analyte is glucose.

12. The test strip according to claim 1, wherein said test strip is present in a meter.

13. The test strip according to claim 1, wherein each of said reaction zones has its own fluid channel to provide for fluid communication between said reaction zone and the external environment.

14. The test strip according to claim 1, wherein at least two of said reaction zones have fluid channels that merge to produce a single channel to provide for fluid communication between said reaction zones and the external environment of said test strip.

15. The test strip according to claim 1, wherein said plurality of reaction zones comprises a porous matrix.

16. The test strip according to claim 1, wherein said hydrophobic barrier is a thermally transferred hydrophobic barrier.

17. A method for determining the concentration of at least one analyte in a physiological sample, said method comprising:

(a) applying said physiological sample to a test strip comprising a plurality of reaction zones, wherein each of said reaction zones is defined by a hydrophobic barrier and a reagent composition is present within each of said reaction zones;

(b) detecting a signal produced by the reaction of said reagent composition with said physiological sample; and

(c) relating said detected signal to the amount of said at least one analyte in said physiological sample.

18. The method according to claim 17, wherein said hydrophobic barrier comprises hydrophobic ink.

19. The method according to claim 17, further comprising directing said physiological sample along a channel to each of said reaction zones.

20. The method according to claim 17, wherein said hydrophobic barrier is applied using thermal transfer technology.

21. The method according to claim 17, wherein said method comprises employing a meter.

22. The method according to claim 17, wherein said sample is not absorbed or not substantially absorbed by said hydrophobic barrier.

23. A method for manufacturing a plurality of reaction zones of a test strip, said method comprising:

- (a) positioning a thermal head in alignment with a test strip matrix;
- (b) actuating said thermal head in a manner sufficient to transfer a volume of hydrophobic composition onto said matrix;

whereby said hydrophobic composition is deposited on said matrix to produce a test strip comprising a plurality of reaction zones, wherein each of said reaction zones is defined by said hydrophobic composition.

24. The method according to claim 23, wherein said hydrophobic composition is hydrophobic ink.

25. A kit for determining the concentration of at least one analyte in a physiological sample, said kit comprising:

- (a) at least one test strip according to claim 1; and
- (b) instructions for using said test strip for determining the concentration of at least one analyte in a physiological sample

26. The kit according to claim 25, further comprising a means for obtaining said physiological sample.

27. The kit according to claim 26, wherein said means for obtaining said physiological sample is a lance.

28. The kit according to claim 25, wherein said kit further comprises a meter.

29. The kit according to claim 25, further comprising an analyte standard.